

A NEW THERAPHOSID SPIDER FROM THE CAMERON HIGHLANDS, MALAYSIA

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Lyrognathus liewi sp. nov. is described from the rainforests of westcentral Malaysia. This is the first record of the genus outside its type locality of Assam, India. □*Theraphosid spider, Malaysia, rainforests.*

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Pocock (1895) described *Lyrognathus crotalus*, the type species, from a single female. *L. pugnax* Pocock, 1900 and *L. saltator* Pocock, 1900 from North Khasi Hills and Shillong, respectively are the only other species assigned. Sex was not mentioned for these single specimens. Gravely (1915) examined *L. crotalus*, determined earlier by Hirst, from the Khasi Hills and *L. pugnax* determined by himself, from the Garo Hills and doubted whether they were distinct species. Gravely (1935) considered the three species of *Lyrognathus* synonymous and the genus close to *Selenocosmia* with the exception of the one character of leg IV being incrassate. Gravely (1935) described two males from Khasi Hills as *Selenocosmia pugnax* but assumed they might belong to *Lyrognathus*. Pocock's type material at the British Museum, Natural History is apparently too fragile to loan and examine therefore I offer no opinion on specific synonymies in the genus. I follow Raven (1985) in maintaining *Lyrognathus* and *Selenocosmia* as separate taxa.

Between October 1986 and July 1988, I received eight female *Lyrognathus* from Mr. K.C. Liew, Taiping, Malaysia. This new species of *Lyrognathus* is a new generic record for Malaysia and an extension of range for the genus.

MATERIALS AND METHODS

Measurements are in millimetres, except ocular measurements are made at the same magnification and each unit is 0.055 mm. Measurements of the diameters of the median eyes are from above, those of the lateral eyes were made from the side. The width of the eyegroup refers to the distance between the two outer eyes but also includes the diameters of these eyes. The ratio of the eyes is expressed in units which are taken from the divisions of the micrometer scale. The

eyes are measured across their greatest width and the distance between the eyes is measured along the shortest distance. The median ocular quadrangle formed by the median eyes is measured to include the eyes and the ratios are obtained in the same way as the ratio of the eyes; AME— anterior median eyes; ALE— anterior lateral eyes; PME— posterior median eyes; PLE— posterior lateral eyes; MOQ— median ocular quadrangle.

Segments of legs are measured dorsally in a straight line from articulation to articulation. Claws are not included in measurements of tarsi. The leg formula expresses relative lengths of the legs from longest to shortest length. Spination patterns are recorded from the specimen according to the following conventions: v—ventral, p—prolateral, d—dorsal and r—retrolateral; spine positions are reported from distal to proximal, unpaired spines are listed as 1, paired or a transverse series of 3 spines are listed as 2 or 3.

Spermathecae were dissected out and the muscle coat removed with fine needles. Illustrations were made with the assistance of a squared eyepiece reticule.

Lyrognathus Pocock, 1895

Lyrognathus Pocock, 1895: 170, 175; Pocock, 1900: 187, 202; Simon, 1903: 954, 956; Gravely, 1915a: 415; Gravely, 1915b: 284; Gravely, 1935: 83; Roewer, 1942: 264; Bonnet, 1957: 2675; Brignoli, 1983: 132; Raven, 1985: 38, 118; Platnick, 1989: 105..

Selenocosmia (Lyrognathus) Gravely, 1935: 83.

TYPE SPECIES

Lyrognathus crotalus Pocock, 1895; by monotypy.

DIAGNOSIS

All tarsi integral with tarsi IV divided by setae and tibia and metatarsus IV strongly incrassate.

Prolateral surface of maxillae with numerous bacilliform lyra setae acting against a line of spike setae (strickers) on the retromargin of the cheliceral furrow.

REMARKS

Lyrognathus differs from other Selcnocosiinae primarily by the tibia and metatarsi IV being strongly incrassate. With the exception of this character *L. liewi* is similar to female *Coremiocnemis validus* (Pocock, 1895) not only from the same locality but in color, size and possessing the same horizontally aligned peg-like setae on the intercheliceral face.

DISTRIBUTION, HABITAT AND BURROW

L. liewi is known from the wet dipterocarp and montane rainforests of Cameron Highlands, Pahang, in the main range and from Baling, Kedah, and Grik, Perak, in the eastern range of west Malaysia. Female *L. liewi* make a silk-lined burrow averaging 50–100cm in length and 3cm in diameter enlarging into a small chamber distally. The burrow usually has a leaf-lined or twig debris collar that is flush with the ground on the rainforest floor; sloping ground on open forest fringes or roadsides is preferred. When disturbed *L. liewi* will readily bite. 'Orang Asli' people call these large mygalomorphs 'Teifoo' or Earth tiger and believe the bite is fatal.

Lyrognathus liewi sp. nov. (Figs 1–11, Table I)

ETYMOLOGY

For Mr. K. C. Liew who collected the specimens and supplied the natural history information.

MATERIAL

Holotype ♀ and seven paratype ♀♀ Cameron Highlands, Pahang, West Malaysia, 4°41'N; 101°52'E. Holotype ♀ and two paratype ♀♀ QM Nos 15460, 15461 and 15462, respectively; other five paratype ♀♀ in author's collection. Locations 3 ♀♀, off 24th mi. Road, Cameron Highlands, Pahang, Malaysia, Oct.–Nov. 1986, coll. K.C. Liew; 5 ♀♀, off 24th mi. Road, Cameron Highlands, Pahang, Malaysia, July 4–12, 1988, coll. K.C. Liew; 2 ♀♀ (dried) Baling, Kedah, and 1 ♀ (dried) Grik, Perak, Malaysia, Nov. 1980, coll. H. Wong.

DIAGNOSIS

Large mygalomorph spider. Female with tibia

and metatarsus IV strongly incrassate, metatarsus IV tapering distally. Retrolateral face of patella, tibia and metatarsus IV with dense brush of hair, tapering distally on metatarsus IV. Females with horizontally aligned short and long peg-like (thorny) setae on intercheliceral face. Spermathecae variable, bilobed on holotype female, both tri- and bilobed on paratype females. Males unknown.

DESCRIPTION

Holotype female. Carapace 18.54mm long, 15.40mm wide. Abdomen (slightly collapsed) 20.90mm long, 14.03mm wide. Total length 39.44mm.

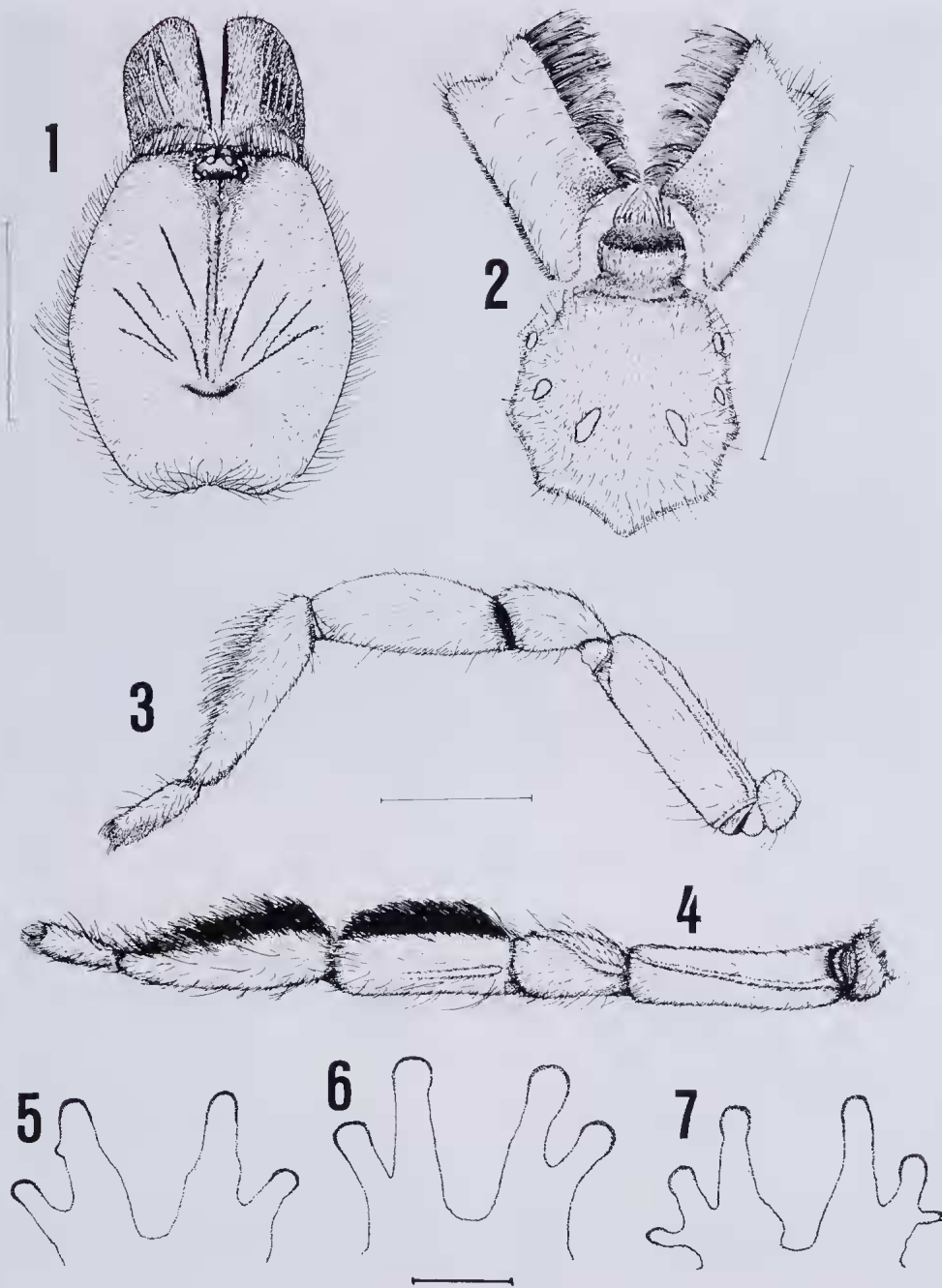
Colour. Carapace uniform brown; legs I, II and palp light brown, all femora dark brown, legs III and IV dark brown, longer red brown hairs on leg IV; chelicerae light brown on dorsal and lateral surface; abdomen entirely dark brown with longer red brown hairs on dorsal and lateral surfaces. In alcohol carapace, legs and chelicerae entirely dark red brown, abdomen and dense brush of hair on leg IV dark brown.

Carapace. Fovea broad, closed, procurved; uniformly hirsute, cuticle almost obscured; eight long setae in group in front of AME, two long setae between ALE-PLE, ten long setae in a group between PLE, few short anteromedial bristles; clypeus about one AME diameter long; striae shallow; caput strongly arched; lateral margins with longer setae, anterior margin with many long bristle setae.

Eyes. Tubercle rectangular, distinct, higher posteriorly, sloping in front to anterior margin; group occupies 0.26 of headwidth; group front width: back width: length, 49:49:21, ratio of AME:ALE:PME:PLE, 10:6:5:5; MOQ front width: back width: length, 27:37:23; interspaces (as diameters of an AME): AME-AME, 0.5; AME-ALE, 0.4; ALE-PLE, 0.6; PME-PLE, 0.1; PME-PME, 2.7.

Chelicerae. Stout; rastellum absent; 14–16 closely set teeth on promargin of furrow, many granular teeth basomesally; long line of short and long spike setae (strickers) on the retromargin of the furrow; c. 25 modified horizontally aligned peg-like setae, short and stout, pointed apically.

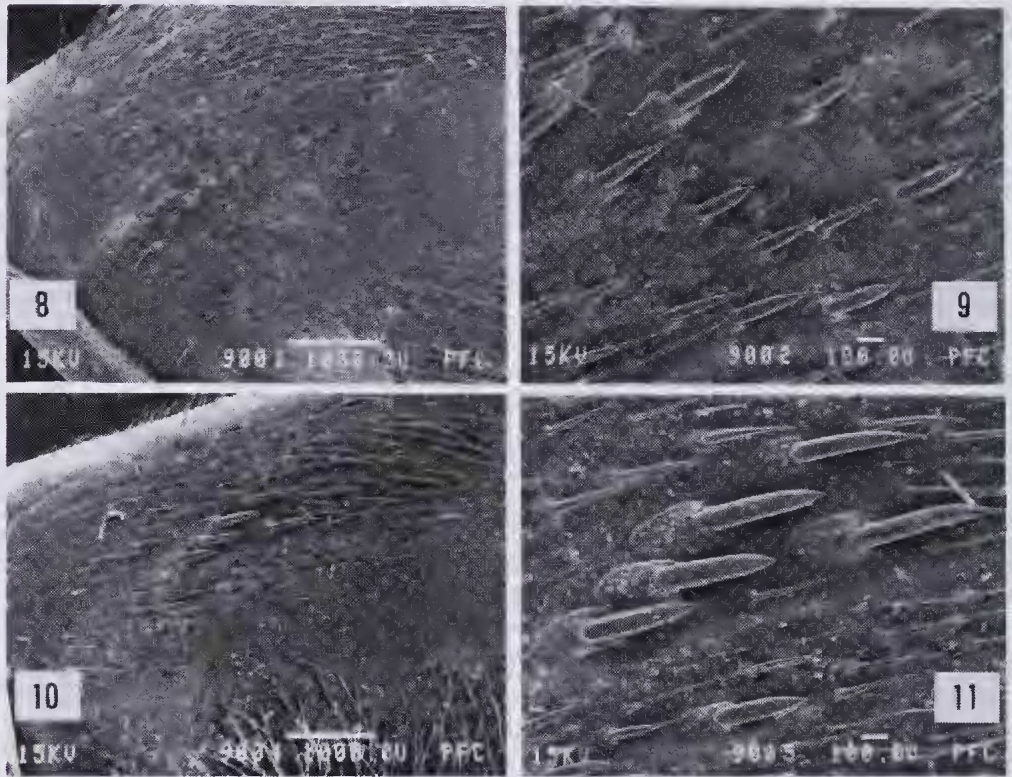
Labium. 2.64 long, 3.69 wide; rectangular, anteriorly slightly procurved; with dense group of over 300 cuspules on anterior third; labiosternal suture consisting of deep groove with two lateral sigilloid elongate lobes, slightly raised, glabrous.



FIGS 1-7. *Lyrognathus liewi*, female from Cameron Highlands; 1, Cephalothorax and chelicerae, dorsal view. 2, Sternum, maxillae, labium and chelicerae, ventral view. 3, Leg IV, dorsal view. 4, Leg IV, prolateral face. 5, 7, Spermathecae of paratype females, dorsal view. 6, Spermathecae of holotype female, dorsal view. Scale line = 1cm (Figs 1-4), =1mm (Figs 5-7).

Maxillae. 8.09 length behind, 6.38 length front, 3.74 width; broad; average 200 cuspules on inner corner; anterior lobe distinct; serrula not

evident; maxillae and labium covered with long erect bristles and short hairs; prolateral surface



FIGS 8,9. *Coremiocnemis validus* Pocock, 1895, female from Cameron Highlands, scanning electron micrographs. 8, Chelicerae, prolateral face showing peg-like setae. 9, Chelicerae, prolateral face showing enlarged peg-like setae. 10,11. *Lyrognathus liewi*, paratype female from Cameron Highlands, scanning electron micrographs. 10, Chelicerae, prolateral face showing peg-like setae. 11, Chelicerae, prolateral face showing enlarged peg-like setae. Scale line = 1mm (Figs 8,10), 0.1mm (Figs 9,11).

with distinct area of bacilliform setae forming a lyra.

Sternum. 8.36 long, 8.09 wide; round; short brown prostrate hairs interspersed with erect short dark brown bristles obscuring cuticle, longer marginally; posterior sigilla oval, 1.16 long, 2.09 from margin; middle sigilla oval, 0.94 long, 0.66 from margin; anterior sigilla (barely visible) round, 0.39 long, 0.55 from margin; all sigilla glabrous.

Legs. IV much thicker and longer than I, II and III; patella, tibia and metatarsi IV incrassate, thicker retrolaterally with erect brush of hair adding to the effect; ventral coxae with dense mat of short brown prostrate hairs interspersed with short erect dark brown bristles as on sternum; femoral setal mat obscures cuticle of dorsal and ventral surface and prolateral face of III and IV, femur I, II, and palp with wide glabrous band on 1/2-2/3 of prolateral face, IV with wide glabrous band on 2/3 of retrolateral face, narrow

glabrous band on 1/2 to full length of retrolateral face of femur I, II, III and palp; all patellae with one or two narrow dorsal glabrous bands; all metatarsi with one proximal dorsal narrow glabrous band; patellae, tibiae, metatarsi and tarsi with short prostrate hairs interspersed with longer more erect hairs, IV much more hirsute than others obscuring cuticle; spines present on distal metatarsi.

Scopula. Deep dense pile for full length of all tarsi, metatarsi I and II; equally dense but distally for 1/2 of metatarsi III and 1/3 metatarsi IV; metatarsi and tarsi IV divided by setae.

Spines. Metatarsi I, v1; II, v3; III, v2d2; IV v3d2.

Claws. Palpal and paired claws bare; unpaired claws absent; claws do not project beyond the scopula.

Trichobothria. 4-5 in a single dorsal row of tibia I for full length; 2-3 irregular rows, each row proximally retrolateral, distally dorsal;

TABLE 1. Leg measurements of *Lyrognathus liewi* holotype female.

	Leg 1	Leg 2	Leg 3	Leg 4	Palp
Femur	14.02	11.72	10.78	14.69	9.08
Patella	9.02	7.87	6.99	8.80	5.67
Tibia	9.90	7.98	6.77	12.21	6.49
Metatarsus	8.42	7.70	8.91	15.40	—
Tarsus	4.95	4.57	4.40	5.50	5.94
Total	46.31	39.84	37.85	56.60	27.18

metatarsi and tarsi I trichobothrial zone marked also by short setae; 70–80 long filiform and short clavate on tarsi I in a broad band.

Spermathecae. Variable; usually bilobed; branches confluent before vulval chamber; inner branch longer than outer branch.

Spinnerets. Posterior medians 2.53 long; basal, middle, distal and total length of posterior lateral articles 3.41, 2.59, 2.81, 8.81 long respectively.

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